

REMARKS

Applicant requests favorable reconsideration and allowance of this application in view of the foregoing amendments and the following remarks.

Claims 1, 3, 4, 6-9, 11-13 and 44-78 are pending in this application, with Claims 1, 4, 9, 44, and 45 being independent.

Claims 2, 5, and 10 have been cancelled. Claims 1, 3, 4, 6, 9, and 11 have been amended and new Claims 71-78 have been added. Applicant submits that support for the amendments and new claims can be found in the original disclosure, and therefore no new matter has been added.

Applicant notes with appreciation the indication that Claims 44 and 45 remain allowed by the Examiner over the cited art.

Claims 1, 4, 9, and 61-70 stand rejected under 35.U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,002,800 (Donnelly, et al.). Claims 2, 3, 5, 6, 8, 10, 11, and 13 were rejected under Section 103 as being unpatentable over Donnelly, et al. in view of U.S. Patent No. 6,351,550 (Inaoka, et al.). Applicant respectfully traverses these rejections for the reasons discussed below.

As recited in independent Claim 1, the present invention includes, *inter alia*, the features of processing an image to provide an encoded representation of the image at a predetermined resolution, the encoded representation being adapted to emphasize the elements of an embedded mark based on predetermined color characteristics of the elements, detecting a location of each of the elements from the encoded representation, applying a mask having a predefined annular region to the mark to convert the detected element locations that fall within the annular region into a set of spatial features representing an angular distribution of the

detected elements of the mark, comparing the determined set of spatial features to a known set of spatial features to provide a confidence level measure, and detecting the predetermined mark on the basis of the confidence level measure. Independent Claims 4 and 9 recite similar features. Applicant submits that the cited art does not disclose or suggest this combination of features.

Donnelly, et al. discloses an image detection system for detecting an image in an input pixel stream. Among other distinctions, that patent does not disclose or suggest at least the feature of applying a mask having a predefined annular region to an embedded mark to convert detected element locations that fall within an annular region to a set of spatial features representing an angular distribution of the detected elements. That patent does determine an angular distribution of elements of a mark, and further it does not disclose applying a mask having an annular region. Accordingly, Applicant submits that Donnelly, et al. fails to disclose or suggest at least the above-mentioned features.

Inaoka, et al. fails to remedy the above-noted deficiencies of Donnelly, et al. Inaoka, et al. discloses an apparatus for verifying a seal imprinted on a document and is relied upon in the Office Action to show an angular distribution. That patent does disclose, with respect to Fig. 22d, calculating the relative position coordinates of four feature points by determining distances X, Y, and Z between various feature points and calculating angles alpha and beta, which are simply inverse cosine relationships between Z and Y and between X and Y, respectively. However, Applicant submits that this is not a detection of an angular distribution of elements of a mark, and in any event does not involve applying a mask having a predefined annular region to convert detected element locations within the annular region to a set of spatial features representing an angular distribution of the elements. Accordingly, even if the cited art is

combined (assuming such a combination would be proper), Applicant submits that it does not disclose or suggest at least the above-mentioned feature.

For the foregoing reasons, Applicant submits that independent Claims 1, 4, and 9 are also patentable over the art of record. The dependent claims are patentable for at least the same reasons as the independent claims, as well as for the additional features they recite.

In view of the foregoing, Applicant submits that this application is in condition for allowance. Favorable reconsideration, withdrawal of the outstanding rejections, and an early Notice of Allowance are requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Brian L. Klock', is written over a horizontal line.

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